

**188.980 / SS 2025**

**Advanced Information Retrieval**

# **Exercise Introduction**

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# Exercise (Group Work)



## CLEF 2025: Selected Retrieval Tasks

1. BioASQ Task 1 - b: Biomedical Semantic Question Answering (Task 13b) \*
2. CheckThat! Subtask 4.2 - SciWeb Claim-Source Retrieval \*
3. LongEval Task 1 - WebRetrieval \*
4. LongEval Task 2 - SciRetrieval \*
5. JOKER Task 1 - Humor-aware Information Retrieval \*\*

\* Datasets and task descriptions released

\*\* Datasets and task descriptions not yet released, organizer's response pending

# Exercise Preparation

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- Exercise in groups
  - 15 groups per task available
  - 5 persons per group
  - Evaluation through task-specific metrics, competition via leaderboard
  - Participation necessary, writeup in report at end of task (submit via TUWEL)

## Exercise

[Link to TISS](#)



### Group Registration

Register your group for a topic here! (Groups are limited to 15 per topic.)



### BioASQ Forum

Subscribe for discussions on BioASQ Task 1 - b: Biomedical Semantic Question Answering (Task 13b)



### CheckThat! Forum

Subscribe for discussions on CheckThat! Subtask 4.2 - SciWeb Claim-Source Retrieval



### LongEval Task 1 - WebRetrieval Forum

Subscribe for discussions on LongEval Task 1 - WebRetrieval



### LongEval Task 2 - SciRetrieval Forum

Subscribe for discussions on LongEval Task 2 - SciRetrieval



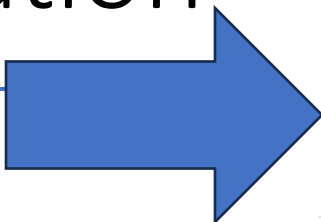
### JOKER Forum

Subscribe for discussions on JOKER Task 1 - Humor-aware Information Retrieval

# Exercise Registration

- Step 1

- Register your group in the chosen topic via TUWEL
- Until March 31
- Opens today at 18:00
- Coordinate beforehand which group you are targeting so you end up in the right group



## Exercise

[Link to TISS](#)



### Group Registration

Register your group for a topic here! (Groups are limited to 15 per topic.)



### BioASQ Forum

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### CheckThat! Forum

Subscribe for discussions on CheckThat! Subtask 4.2 - SciWeb Claim-Source Retrieval



### LongEval Task 1 - WebRetrieval Forum

Subscribe for discussions on LongEval Task 1 - WebRetrieval



### LongEval Task 2 - SciRetrieval Forum

Subscribe for discussions on LongEval Task 2 - SciRetrieval



### JOKER Forum

Subscribe for discussions on JOKER Task 1 - Humor-aware Information Retrieval

# Exercise Registration

- Step 1
  - Register your group in the chosen topic via TUWEL
  - Until March 31
  - Opens today at 18:00
  - Coordinate beforehand which group you are targeting so you end up in the right group
- Step 2
  - Register yourself in the corresponding discussion forum

## Exercise

[Link to TISS](#)



### Group Registration

Register your group for a topic here! (Groups are limited to 15 per topic.)



#### BioASQ Forum

Subscribe for discussions on BioASQ Task 1 - b: Biomedical Semantic Question Answering (Task 13b)



#### CheckThat! Forum

Subscribe for discussions on CheckThat! Subtask 4.2 - SciWeb Claim-Source Retrieval



#### LongEval Task 1 - WebRetrieval Forum

Subscribe for discussions on LongEval Task 1 - WebRetrieval



#### LongEval Task 2 - SciRetrieval Forum

Subscribe for discussions on LongEval Task 2 - SciRetrieval



#### JOKER Forum

Subscribe for discussions on JOKER Task 1 - Humor-aware Information Retrieval

# Exercise Registration

- Step 3: Register at CLEF
  - <https://clef2025-labs-registration.dei.unipd.it>
  - **Until Friday, 25 April!**

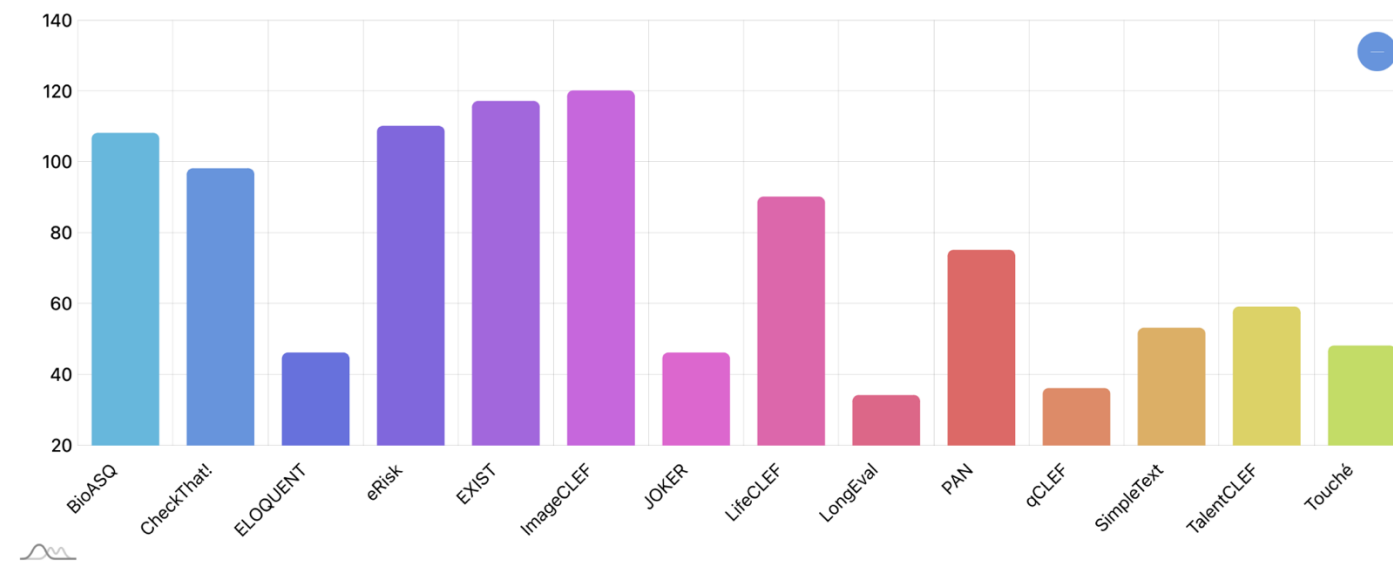


CLEF 2025  
Labs Registration



Registration closes on Friday, 25 April 2025

Overall Unique Registered Teams to Date: 568



# Exercise Registration








## CLEF 2025 Labs Registration

- Step 3: Register at CLEF
  - <https://clef2025-labs-registration.dei.unipd.it>
  - **Until Friday, 25 April!**
  - One person from group needs to register
  - One topic only
  - You will receive a confirmation email and task specific instructions
  - Submit your team name on TUWEL so we know

**ONLY ONE registration is required for each team.**

### Contact Information

Team	 Enter the name your team [mandatory]
Affiliation	 Enter the full affiliation of your team
Country	 Choose the country of your team [mandatory]
Contact Person	 Enter the contact person for your team [mandatory]
Contact Email	 Enter the contact e-mail for your team [mandatory]

### Lab Selection

**BioASQ** - A challenge in large-scale biomedical semantic indexing and question answering (<https://www.bioasq.org/workshop2025>)

- ☐ Task 1 - b: Biomedical Semantic Question Answering
- ☐ Task 2 - Synergy: Question Answering for developing problems
- ☐ Task 3 - MultiClinSum: Multilingual Clinical Summarization
- ☐ Task 4 - BioNNE-L: Nested Named Entity Linking in Russian and English
- ☐ Task 5 - EICardioCC: Clinical Coding in Cardiology
- ☐ Task 6 - GutBrainIE: Gut-Brain Interplay Information Extraction

**CheckThat!** - Lab on Subjectivity, Fact-Checking, Claim Extraction & Normalization, and Retrieval (<https://checkthat.gitlab.io>)

- ☐ Task 1 - Subjectivity
- ☐ Task 2 - Claim Normalization

# Exercise – Tasks: BioASQ Task 1 - b

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- Large-scale biomedical semantic indexing and question answering
- Task goal: Biomedical questions (English) + expert (reference) answers. The participants have to respond with (retrieve) relevant articles, and snippets from designated resources, as well as exact and "ideal" answers
- Document, passage, entity retrieval – you can pick one or many!
- Status: Training data available, test data later
  - Released at <https://participants-area.bioasq.org/datasets/>
  - Needs extra registration for downloading
  - Data available & evaluated in batches, individual winners, multiple phases



# Exercise – Tasks: CheckThat! Subtask 4.2

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- Scientific Claim Source Retrieval
- Task goal: Given an implicit reference to a scientific paper, i.e., a social media post (tweet) that mentions a research publication without a URL, retrieve the mentioned paper from a pool of candidate papers
- Document retrieval; evaluated on Mean Reciprocal Rank (MRR@5)
- Status: Training data released (train/dev)
  - [https://gitlab.com/checkthat\\_lab/clef2025-checkthat-lab/-/tree/main/task4/subtask\\_4b](https://gitlab.com/checkthat_lab/clef2025-checkthat-lab/-/tree/main/task4/subtask_4b)
  - Starter code in Python available, also for outputting proper submission format

# Exercise – Tasks: [LongEval Task 1 - WebRetrieval](#)

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- Evaluate persistence in retrieval efficiency over time (as data changes), on Web documents (in French)
- Sequence of datasets collected at different points in time; distances between two datasets are called “lags”
- Evaluation: differences in evaluation metrics over lags
- Status: Training dataset released
  - [LongEval 2025 Web Retrieval Train Collection](#)
  - Submission & evaluation on CodaLab: to be made available
  - Slack channel available, task organized by TU Wien colleagues

# Exercise – Tasks: [LongEval Task 2 - SciRetrieval](#)

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- Evaluate persistence in retrieval efficiency over time (as data changes), on scientific articles
- Sequence of datasets collected at different points in time; distances between two datasets are called “lags”
- Evaluation: differences in evaluation metrics over lags
- Status: Training dataset released
  - [LongEval 2025 CORE Retrieval Train Collection](#)
  - Submission & evaluation on CodaLab: to be made available
  - Slack channel available, task organized by TU Wien colleagues

# Exercise – Tasks: JOKER Task 1

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- Humour-aware Information Retrieval
- Task: Retrieving short humorous texts from a document collection based on a given query. The retrieved texts should fulfill the dual criteria of being relevant to the query and being instances of wordplay.
- Overview of 2024 Tasks: <https://ceur-ws.org/Vol-3740/paper-165.pdf>
- Status: Data not yet released, response by organizers pending
  - Possible development based on resources from previous years
  - Waiting for another week, then reassignment of teams to other chosen task

# Exercise – Course Challenges

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- Irrespective of the chosen task, three different approaches need to be implemented and submitted for evaluation:
  1. a “traditional” IR model, cf. Crash Course IR Block
  2. a “neural” NLP representation learning approach
  3. a “neural” re-ranking model
- Depending on the task models discussed in the online lectures might be applicable more directly or might need adaptation
- Follow the rules of the respective shared task on whether pre-trained models are allowed, and which requirements need to be met

# Exercise – Course Challenges

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- You can choose the complexity of the approaches as long as you make a valid point why they fall in the corresponding categories; no trivial or random submissions other than exploring baselines (no extra points)
- Make your own contribution, i.e., do not just use a repository from a past year, but improve upon existing solutions
- Writeup in a report
  - How you addressed the challenges faced
  - Which approaches and resources you used to address the challenges
  - Where your own contribution lies
  - How your submissions performed (metrics), how you did on the leaderboard

# Exercise – Grading (total: 60 pts)

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- Points for documented valid submissions
  1. “Traditional” IR model: max. 10 pts
  2. “Representation learning” approach: max. 20 pts
  3. “Neural” re-ranking model: max. 20 pts
- Report quality: max. 10 pts
- Bonus point opportunities 🎉👏💯✨
  - For creative extra work, e.g., other subtasks, if you have fun and time, go for it and you’ll get extra points
  - Best AIR teams per task get bonus points too!

# Exercise – Towards the End

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- If you find your solution(s) particularly interesting or well-performing, inform us on time, so we can consider submitting your project as a paper to the labs
  - Abstract submission: 6 May 2025
  - Submission: 13 May 2025
- Course Group Reports are due 22 May 2025, via TUWEL



That's all for today...

Questions?